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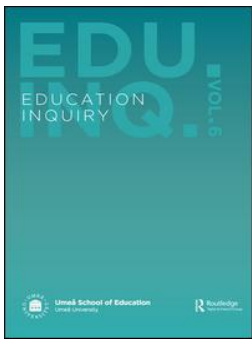
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# Exploring the Reading Practices of Undergraduate Students

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## ABSTRACT

Research in higher education has revealed that only a small proportion of students complete assigned reading during semester. The current studies examined students' reading practices, and sought to explore potential factors underlying these practices. Three studies were conducted. Study 1 utilised a questionnaire to examine how long students spend reading academic material. Students reported spending an average of 14.1 hours per week reading a range of sources, including textbooks and journal articles for both guided and independent reading. The number of hours spent reading was lower than university expectations. Study 2 involved conducting focus groups to explore potential factors underlying students' reading practices. Six main themes emerged in the data; Expectations, Perceived benefits, Course structure, Lack of time, Practicalities, and Confidence. Study 3 further examined students' perceptions of a lack of time and a lack of confidence with reading using a diary exercise and a further questionnaire. The diary exercise revealed that students spent an average of 6.5 hours per day engaged in academic activities. In addition, students were generally confident with reading, although more so with reading textbooks than journal articles. The findings are discussed in terms of implications for staff teaching in higher education.



## KEYWORDS

Reading compliance;  
Reading practices; Reading  
confidence; Academic  
expectations

## Introduction

It is widely accepted that reading plays a vital role in student learning (e.g. Fernald, 2004; Bharuthram, 2012). In universities many courses are organised around a textbook, and course information conveys to students that they are expected to engage in substantial reading. We know intuitively that reading is important for mastering course content, and there is also clear evidence for other benefits of reading. For example, research has shown that students who read more than their peers achieve higher marks in assessments (e.g. Sappington, Kinsey & Munsayac, 2002), become more involved in class discussions (e.g. Leeming, 2002), and develop superior reading comprehension and writing styles (Moktari, Reichard, & Gardner, 2009).

Despite the importance of reading, however, there is growing evidence that only a small proportion of students read the sources recommended by teaching staff. Clump,

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Bauer and Bradley (2004) found that only 27% of undergraduate psychology students completed assigned reading before attending lectures. Similarly, Connor-Greene (2000) found that 72% of students reported rarely or never completing reading assignments on schedule. A sparsity of reading has also been noted in other subject areas, including business (Artis, 2008; Starcher & Profit, 2011), philosophy (Broost & Bradley, 2006), sociology (Howard, 2004), education (e.g. Carney, Fry, Gabriele, & Ballard, 2008; Tomasek, 2009), planning (Sturzaker, 2014), and science (Henderson & Rosenthal, 2006; Jensen & Moore, 2008).

In addition to examining the extent to which students read recommended sources, research has also investigated how much time students spend reading. Acheson, Wells and MacDonald (2008) found that students reported spending an average of 19.2 hours per week reading different sources, including academic material, magazines, newspapers, emails, internet media, fiction books and special interest books. In multidisciplinary studies focussing specifically on reading academic material, Huang, Capps, Blacklock, and Garza (2014) found that on average students reported spending 7.7 hours per week reading. Other studies have reported averages of 9.7 hours per week (Sheorey & Mokhtari, 1994) and 10.9 hours per week (Mokhtari et al., 2009). An outstanding issue, however, is whether these hours are predominantly spent preparing assignments, completing guided or assigned reading, or instead carrying out independent reading. It is also unknown whether the time spent reading changes over the course of a programme, for example alongside academic expectations or course requirements.

Evidence of low frequencies of reading has led researchers to suggest that students do not value reading as much as lectures (e.g. Murden & Gillespie, 1997), and perhaps fail to see the connection between reading and success on exams (e.g. Sappington et al., 2002). The sparsity of reading may also be related to a multitude of other factors, including low levels of reading comprehension (e.g. Ryan, 2006), a lack of motivation and engagement (e.g. Derryberry & Wininger, 2008; Hatteberg & Steffy, 2013), poor attitudes towards reading (Marek & Christopher, 2011), a lack of confidence with reading (Lei, Bartlett, Gorney & Herschbach, 2010), and competing demands for students' time (e.g. Erdem, 2015; Hoeft, 2012; Marek & Christopher, 2011; Starcher & Profit, 2011; Sharma, Van Hoof, & Pursel, 2013).

The current studies explored the reading practices of students at a university in the UK. The first study aimed to examine how long students spend reading academic material, aiming to extend previous research by examining different types of reading including guided or assigned reading and independent reading. Differences between students in each year group were also examined. The second study aimed to explore potential reasons for the finding that the number of hours students dedicate to reading is fewer than expected. Study three then aimed to examine the evidence for two of these potential key reasons; a lack of time for reading and a lack of confidence with reading.

The studies were designed with due consideration of the British Psychological Society Code of Human Research Ethics (British Psychological Society, 2014), and prior to commencement of each study approval was granted from the University ethics committee. Participants were fully informed about the aims of the studies and consented to take part, were free to withdraw from the studies at any time, and all information collected was held in an anonymous form and treated confidentially.

## Study 1

In order to investigate how much time students spend reading academic material, students from three academic schools at a university in the UK were invited to complete a questionnaire.

### Method

#### Participants

The participants were 208 undergraduate students from a university in the UK. They were from three academic schools; Psychology, Biology, and Marine Science. The students were from across the three stages of their undergraduate programme, with 96, 70, and 42 students being in year 1, year 2, and year 3 respectively. As is common in many studies, psychology students were invited to participate to receive course credits (e.g. see Acheson et al., 2008; Clump et al., 2004). Biology and Marine Science students were invited to participate on a voluntary basis.

#### Method and Procedure

In timetabled sessions students were provided with an information sheet about the study and asked to provide their consent to take part. After giving consent students then completed a short questionnaire about their reading practices. They were asked to think about how they had spent their time during the previous seven days, and then to indicate how long they had spent (to the nearest hour) on a range of reading tasks. They responded as to how many hours they had spent reading any academic material, reading textbooks, reading journal articles, doing guided or assigned reading, and doing independent reading. All students completed the questionnaire between weeks five and 10 of a 12 week semester, therefore at least two weeks before sitting any exams. This was deemed to be important in order to get an accurate representation of reading practices during a semester rather than exam preparation practices.

### Results

The means and standard deviations for each questionnaire item are shown in Table 1. Means and standard deviations are presented for all data as well as separately for students in each year group.

A series of one-way ANOVAs were used to examine any differences between year groups. There was no significant effect of year group on the time spent reading all academic material, reading textbooks, or doing independent reading ( $p > 0.05$  in each

**Table 1.** Mean length of time in hours spent reading academic material (standard deviations are shown in parentheses).

	Overall	Year 1	Year 2	Year 3
All reading	14.05 (12.61)	13.09 (13.69)	13.71 (10.96)	16.79 (12.53)
Textbooks	2.22 (4.07)	2.59 (4.06)	2.14 (4.65)	1.50 (2.86)
Journal articles	4.68 (6.22)	2.92 (4.02)	5.30 (5.57)	7.67 (9.42)
Guided reading	3.61 (5.74)	2.73 (4.10)	4.06 (7.11)	4.93 (6.21)
Independent reading	2.21 (5.08)	1.55 (2.66)	2.51 (5.20)	3.21 (8.13)

case). There was also no significant effect of year group on guided or assigned reading ( $F_{(2, 205)} = 2.46, p = 0.08$ ). There was, however, a significant effect of year group on time spent reading journal articles ( $F_{(2, 205)} = 9.80, p < 0.01$ ). Pairwise comparisons revealed significant differences between students in year 1 and year 2, and year 1 and year 3 ( $p < 0.05$  in each case), with no significant difference between students in years 2 and 3.

## Discussion

Study 1 aimed to examine how much time students spend reading academic material, extending previous research by examining different types of reading including guided or assigned reading and independent reading. Students reported spending an average of 14.1 hours per week reading academic material. However, it is also important to note that there was a high degree of variation in the time spent reading, with some students reporting substantial reading and others reporting relatively little. Differences across year groups were also examined. On average, students in later years of their programme reported engaging in more reading of journal articles. This finding is consistent with academic expectations, with final year courses relying less on textbooks and emphasising the importance of familiarity with recent research studies. Previous studies have also reported that students later in their degree programme allocate more time to independent learning activities when compared to first year students (e.g. Thomas, Hockings, Ottaway, & Jones, 2015). In the current study there were no statistically significant differences between the year groups in terms of independent study. However, the mean values suggest that there may be potential in exploring this issue further.

It is interesting to note that the time that students reported reading for is longer than that reported in previous studies. Huang et al. (2014), Sheorey and Mokhtari (1994), and Mokhtari et al., (2009) reported averages of 7.7, 9.7, and 10.9 hours respectively. As each of the studies used a multidisciplinary sample this could be a result of differences in programme structure, institutional expectations, or the composition of the student cohort. It is also worthy of note that previous studies have cast doubt on the accuracy of students' self-reports when it comes to reading. Individuals tend to over-report desirable behaviours (e.g. Gosling, John, Craik, & Robins, 1998). For example, Sappington et al. (2002) collected self-reports of reading compliance and compared them to an independent measure. Results suggested a self-enhancement bias, with 93% of students claiming to have completed assigned reading but only 22% demonstrating this when using the empirical measure. In the current study participants were invited to complete the questionnaire in a lecture or seminar session. It is possible that this may have increased the effects of social desirability, with students claiming to have completed more reading when in the presence of a member of teaching staff. Nevertheless, the reported hours spent reading were still lower than university expectations. In each of the academic schools there are clear guidelines about how much time students should expect to allocate to work for each unit of credit. Averaged over the course of semester and vacation, revision, and examinations weeks, these suggest that students should spend at least 25 hours per week reading or interacting with academic material.

Several factors could potentially underlie this finding, such as the perceived value of reading (e.g. Murden & Gillespie, 1997), a lack of motivation and engagement (e.g. Derryberry & Wininger, 2008; Hatteberg & Steffy, 2013), a lack of confidence with

reading (Lei et al., 2010), and competing demands for students' time (e.g. Erdem, 2015; Hoeft, 2012; Marek & Christopher, 2011; Starcher & Profitt, 2011; Sharma et al., 2013). Study 2 was designed to identify influential factors.

Study 2

Having explored how much time students spent reading academic material, Study 2 aimed to explore factors that may be related to students' reading practices. Students from each of the three academic schools were invited to participate in focus groups. Focus groups were recorded and analysed in order to identify any particular themes. A particular emphasis was placed on potential reasons for low frequencies of reading.

Method

Participants

The participants were undergraduate students from three academic schools; Psychology (two year 1 students, three year 2 students, and two year 3 students), Biology (five year 2 students and two year 3 students), and Marine Science (one year 1 student, three year 2 students, and one year 3 student). They were invited to attend focus groups on a voluntary basis, with Psychology students also being offered course credits (see Study 1).

Method and Procedure

Focus groups were held with student volunteers. A separate focus group was held for each subject with between five and seven participants in each group. Each focus group was conducted by one member of the project team whilst another took notes (neither member of the team was from the students' own subject). Focus groups were also audio recorded. Semi-structured question prompts were used (Table 2). All focus groups took place in week 11 or 12 of a 12 week semester. The data were then analysed using thematic analysis. This included the steps of becoming familiar with the data,

Table 2. Questions used in focus groups.

Main question	Follow-up questions
(1) What is your understanding of how much you are expected to read?	
(2) What is your understanding of what you are expected to read?	
(3) Do you think reading is important?	(3.1) Why do you think reading is important? (3.2) Why do you read?
(4) What kind of obstacles might prevent you reading?	
(5) How confident are you at reading different sources?	
(6) How confident are you that you can identify the key message(s) in what you read?	(6.1) Which parts of a research paper do you most value?
(7) What strategies do you employ when reading?	(7.1) Could we do anything to help with your reading?
(8) What are your views or opinions about doing set reading before or after a lecture?	(8.1) Do you do the set reading? (8.2) Do you think reading tasks are helpful? (8.3) Do you enjoy them?
(9) What would encourage you to do more reading?	
(10) Can you give any examples of modules that have encouraged you to read a lot?	

generating the themes that described the data, identifying the evidence which reflected the themes, reviewing the themes and evidence, and naming and redefining the themes (e.g. Braun & Clarke, 2006).

## Results

The analysis revealed six main themes, considered as factors which may influence students' reading practices. These were (1) Expectations, (2) Perceived benefits, (3) Course structure, (4) Lack of time, (5) Practicalities, and (6) Confidence. In terms of Expectations, students reported that they understand what is expected of them - whether it be how much reading they are supposed to do or which particular sources are essential to read (e.g. *"There is a resource slide at end of each lecture, one key source is usually highlighted"*). The participants also recognised that there is a progression from year 1 to year 3 - reading more textbooks at year 1 and primary literature at year 3 (e.g. *"First we are directed to textbooks but then we are directed more towards journals in third year"*). Regarding Perceived benefits, they perceived there to be several benefits of reading, including acquiring background knowledge, deepening understanding, helping visualise words and concepts, finding evidence to support a point being made in coursework, helping to develop writing skills, and gaining higher marks in assessments (e.g. *"you will be looking for general information to put in an exam answer"*). In terms of Course structure the students suggested that they would read more if it was required in order to understand a lecture, before attending a seminar, or if they were to be quizzed on material (e.g. *"A test might influence people to read more"*).

In terms of Lack of time students commented on academic workload (e.g. *"You only have time to do a lot of reading when you don't have classes"*). This was exacerbated when too many deadlines fell within a short period of time (e.g. *"We had two big assignments due in, including a literature review, there is no way you can keep up"*). In terms of Practicalities, some students cited problems with difficulty finding appropriate sources, access problems for some journals and limited printing credits (e.g. *"Printing off is going to be a lot of money at the library"*). Finally, in relation to Confidence, students reported a lack of confidence in being able to identify key messages in what they read (e.g. *"Sometimes I need to go through the same sentence a number of times until I understand it or get a gist"*). They also acknowledged that this comes with practice and increases as they progress through their degree programme (e.g. *"Primary papers get easier to read as you move through your degree"*), and that taught sessions to talk students through how to read a journal article would be beneficial (e.g. *"One lecturer went through how to read a paper in first year. It was very useful"*).

## Discussion

The aim of Study 2 was to explore potential reasons for the relatively low rates of reading reported in Study 1. The analysis of the focus groups revealed six main themes, considered as factors which may influence reading practices. One theme was Expectations. Students understand what is expected of them regarding how much reading they should do and what they should be reading. This appears to suggest that teaching staff are doing a reasonable job of managing students' expectations in terms of



reading, by providing appropriate information at induction, in course documentation, or in taught sessions. Another theme was Perceived benefits. Students reported that they appreciate the benefits of reading, including its importance for good grades. This is in contrast to the findings of Sappington et al., (2002) who reported that students fail to see the connection between reading and success on exams. It is, however, important to note that as volunteers for the focus groups were self-selecting, the responses may not be representative of the whole student population. Some students may still benefit from further guidance as to how much time they should spend reading and how they should spend this time.

The third theme that emerged in the data was that of Course structure. For example, students suggested they would read more if they were to be quizzed on material (see also Hatteberg & Steffy, 2013; Heiner & Wieman, 2014; Howard, 2004; Johnson & Kiviniemi, 2009). Another key theme was that Lack of time was a key factor that negatively affected reading habits. The issue of lack of time has also been identified in other studies (Hoeft, 2012; Marek & Christopher, 2011; Starcher & Profitt, 2011; Sharma et al., 2013; Thomas et al. 2015). It could be that students perceive that there is a lack of time for reading due to other academic commitments including attending lectures or completing assignments. This suggests that when setting deadlines (particularly in modular courses), teaching staff should review deadlines from a student's perspective to determine whether there would be any barriers to independent study. Alternatively, the perceived lack of time could result from competing non-academic commitments, such as involvement in sports and societies or having a part-time job. Therefore research should perhaps further examine the nature of the perceived lack of time.

Students also raised the Practicalities of reading textbooks and journal articles, including problems such as limited access for some journals and limited printing credits (see also Thomas, Hockings, Ottoway, & Jones, 2015). Confidence was also mentioned several times during the focus groups (see also, Lei et al., 2010), and students suggested that taught sessions to talk students through how to read a journal article would be beneficial. This highlights the need for teaching staff to consider how to best develop students' reading practices, and the importance of students being confident with their reading and knowing what to do for independent learning (see also Thomas et al., 2015).

From the six themes identified in the current study, it was of particular interest to consider those factors which potentially act as a barrier to students' reading. Although Expectations and Perceived benefits may well be related to reading practices, the focus groups suggested that students already know what is expected of them and appreciate the benefits of reading. The factors of Course structure and Practicalities were deemed as important factors for further consideration, but due to the need to consider resource provision and staff time it was decided that if investigated further this would require the participation of staff rather than the investigation of student perspectives. The results did, however, suggest that student views about factors of Lack of time and Confidence may warrant further investigation in the current studies. The perceived lack of time and lack of confidence with reading were therefore further explored in Study 3.

### Study 3

Study 3 aimed to further explore two of the themes that emerged from the focus groups; students' perceived lack of time, and lack of confidence with reading. It aimed to determine whether there is indeed a shortage of time for reading in students' degree programmes, and if so whether this is a result of competing academic or non-academic commitments. It also aimed to explore students' confidence with reading. Students from three academic schools were invited to complete a diary exercise about their activities, and provide ratings of their confidence with reading textbooks and journal articles.

### Method

#### Participants

The participants were 158 undergraduate students. They were from three academic schools; Psychology, Biology, and Marine Science. The students were from across the three stages of the undergraduate programme, with 79, 56, and 23 students being in year 1, year 2, and year 3 respectively. Some of the participants had also taken part in Studies 1 and 2. Again, participants were invited to complete the study on a voluntary basis or to receive course credits (Psychology students).

#### Method and Procedure

Students were asked to complete a closed-response diary about how they had spent their time during the previous working day. For each 60 minute period of a 24 hour day they were asked to select from a number of activities the one that best described what they were doing at that time. Nine categories of activities were provided; 1) attending lectures, seminars or laboratories, 2) carrying out independent academic work, 3) preparing for or completing an assignment or exam, 4) other academic activities (e.g. meeting with a tutor), 5) employment (either paid or voluntary work), 6) leisure and socialising, 7) travel or commuting, 8) relaxation or sleep, and 9) another activity. Of particular interest to the current study was the duration of students' engagements in academic activities (the summation of responses given to 1, 2, 3 and 4). Following the diary exercise students were asked to indicate how confident they felt with understanding and extracting the main points when reading textbooks, and then journal articles. For each they were asked to indicate their confidence on a scale of one to five, with one being very confident and five being very unconfident. All students completed the questionnaire between weeks five and 10 of a 12 week semester, therefore at least two weeks before sitting any exams. This was deemed to be important in order to get an accurate representation of students' activities during a semester rather than exam preparation practices.

### Results

The means and standard deviations for students' engagements in academic and other activities are shown in Table 3. Means and standard deviations are presented for all data as well as separately for students in each year group.

**Table 3.** Mean length of time spent (in hours) on academic and other activities (standard deviations are shown in parentheses).

	Overall	Year 1	Year 2	Year 3
Attending lectures, seminars or labs	1.90 (2.02)	2.28 (2.01)	1.76 (2.20)	0.91 (1.08)
Independent academic work,	2.25 (2.35)	1.90 (2.02)	2.05 (2.12)	3.96 (3.18)
Preparing for or completing an assignment or exam	2.13 (2.43)	1.73 (1.94)	2.77 (3.02)	1.96 (2.10)
Other academic activities	0.18 (0.68)	0.21 (0.75)	0.14 (0.48)	0.19 (0.83)
Paid or voluntary employment	0.41 (1.48)	0.42 (1.56)	0.30 (1.36)	0.65 (1.52)
Leisure activities or socialising	5.22 (3.48)	5.42 (3.74)	5.29 (3.32)	4.39 (2.90)
Travel or commuting	0.98 (1.31)	0.91 (1.20)	1.04 (1.53)	1.08 (1.20)
Relaxing or sleeping	9.69 (2.63)	9.57 (2.64)	10.11 (2.61)	9.09 (2.64)
Another activity	0.82 (1.72)	1.10 (2.18)	0.37 (0.91)	0.91 (1.24)
Total academic activities	6.47 (2.80)	6.13 (2.93)	6.73 (2.42)	7.00 (3.15)
Overall total	23.59 (1.23)	23.54 (.97)	23.84 (1.23)	23.13 (1.82)

A series of one-way ANOVAs were used to examine any differences between year groups. There was a significant effect of year group on time spent attending lectures, seminars or labs ( $F_{(2, 155)} = 4.40, p < 0.05$ ). Pairwise comparisons revealed significant differences between students in year 1 and year 3, but no significant differences between students in years 1 and 2 or years 2 and 3. There was a significant effect of year group on time spent carrying out independent work ( $F_{(2, 155)} = 7.77, p < 0.01$ ). Pairwise comparisons revealed significant differences between students in years 1 and 3, and 2 and 3, but not between students in years 1 and 2. There was also a significant effect of year group on time spent reading in order to prepare for an assignment or exam ( $F_{(2, 155)} = 3.11, p < 0.05$ ), with significant differences existing between students in years 1 and 2 but not years 1 and 3 or 2 or 3. There was no significant effect of year group on time spent on each of the other categories of activity; other academic activities ( $F_{(2, 155)} = 0.19, p > 0.05$ ), total time on academic activities ( $F_{(2, 155)} = 1.26, p > 0.05$ ), paid or voluntary employment, ( $F_{(2, 155)} = 0.45, p > 0.05$ ), leisure activities ( $F_{(2, 155)} = 0.79, p > 0.05$ ), travel and commuting ( $F_{(2, 155)} = 0.23, p > 0.05$ ), relaxation and sleeping ( $F_{(2, 155)} = 1.39, p > 0.05$ ), or another activity, ( $F_{(2, 155)} = 3.03, p > 0.05$ ).

Students reported confidence with reading both textbooks and journal articles is shown in Table 4. Again, amalgamated data are presented alongside data for each year group. Higher scores were indicative of lower levels of confidence.

One-way ANOVAs revealed a significant effect of year group on confidence for textbooks ( $F_{(2, 155)} = 4.45, p < 0.05$ ). Pairwise comparisons revealed significant differences between confidence in years 1 and 3, and 2 and 3 ( $p < 0.05$  in each case), but not years 1 and 2. There was also a significant effect of year group on confidence for journal articles ( $F_{(2, 155)} = 3.08, p < 0.05$ ), with differences between years 1 and 3 ( $p < 0.05$ ) but not between years 1 and 2 or 2 and 3. A repeated measures ANOVA also revealed a significant difference between confidence for textbooks and confidence for journal articles ( $F_{(1, 157)} = 8.50, p < 0.01$ ), with higher scores (indicating lower confidence) for reading journal articles.

**Table 4.** Mean ratings of confidence with reading textbooks and journal articles (standard deviations are shown in parentheses).

	Overall	Year 1	Year 2	Year 3
Textbooks	2.02 (0.65)	2.09 (0.60)	2.07 (0.71)	1.65 (0.57)
Journal articles	2.18 (0.76)	2.27 (0.83)	2.20 (0.70)	1.83 (0.58)

## Discussion

The aim of Study 3 was to examine evidence for two potential barriers to reading that students reported in Study 2; a lack of time for more reading and a lack of confidence with reading. The results of the diary exercise revealed that students reported spending an average of 6.5 hours per day on academic activities, and 2.3 hours per day on independent academic work. There were no significant differences across year groups in overall time spent on academic activities, but students in later years spent less time attending classes and more time engaging in independent work. Several of the activities that students reported in the current study may of course have involved reading (e.g. attending lectures or completing an assignment). However, what is important here is to establish whether students have any more time that could potentially be allocated to reading.

Few students reporting being in either paid or voluntary employment. This is contrast to the findings of a recent national student survey (Endsleigh, 2015), in which a third of students reported working part-time during academic terms. It is possible that this reflects the socio-economic background of students at this particular university, or alternatively that students who work were less likely to take the time to participate in the current study. Students reported spending an average of 5.2 hours per day engaging in leisure or social activities, and 9.7 hours per day relaxing or sleeping. These findings are consistent with those of Braguglia (2005), who found that students reported spending more time on each of a range of other activities than reading, including watching the television, talking on the phone, and using the internet, and suggests that to some extent students have leeway in their choice of activities, and are choosing not to spend more time on academic reading (see also Cerrito & Levi, 1999). However, it is important to note that the average of 6.5 hours per day on academic activities is perhaps not that far off the time spent in focussed activity in a typical working day. Participating in leisure activities such as sports and social associations is also important for students' employability (e.g. Thompson, Clark, Walker, & Wyatt, 2013) as well as health and wellbeing (e.g. Zawadzki, Smyth, & Costigan, 2015). Therefore although students could potentially allocate more time to reading, this would result in less time being available for other activities. Perhaps rather than considering whether students have more time that could be dedicate to reading and academic work, instead the issue to consider is whether more time *should* be dedicated to reading and academic activities.

The findings of the current study also suggest that the majority of students are reasonably confident with reading both textbooks and journal articles. For textbooks 86% of students responded to be "very confident" or "reasonably confident", and for journal articles the proportion of students giving these responses was 79%. Students reported higher levels of confidence for reading textbooks than journal articles, and results also revealed that students later on their programme are more confident than those at earlier stages. This finding is consistent with the results of Study 2, in which students acknowledged that confidence comes with practice and increases as they progress though their degree programme. Previous studies have also revealed increases in the amount of independent study that students engage in (Thomas et al., 2015).

Given the confidence ratings observed in the current Study, it appears that in this particular group of students it is unlikely that a lack of confidence acts as a barrier to reading.

It is therefore important to note the contrast in findings from Study 2 and Study 3. Study 2 demonstrated a perceived lack of confidence with reading. However, Study 3 revealed that most students are confident with reading both textbooks and journal articles. There are several possible explanations of these findings. It may be that the differing results are a consequence of different student samples, or alternatively of the different methods of data collection. For example, it may be easier for students to admit a lack of confidence in a focus group if other students are doing the same, when compared to ticking a box on a questionnaire. Differences could also be a consequence of the time of year the studies were conducted. Study 2 was conducted at the end of an academic semester, when coursework was being submitted and exams were approaching. Study 3 was conducted during the earlier part of a semester. With upcoming assessments students are likely to have felt more anxious about their preparedness and therefore may have reported a lower degree of confidence. The perception of a lack of confidence (and possibly also a lack of time) may therefore change across the course of a programme, having implications for teaching and learning.

It is, however, important to note some limitations with the current study. The diary exercise only allowed for a snapshot of students daily activities. Requiring participants to complete a diary about the last 24 hours could be more reliable than other methods relying on retrospective reporting (e.g. Molina, Campana & Ortega, 2016). A diary method has also been used in several previous studies in higher education (e.g. Bakker, Vergel & Kuntze, 2015; Beckers, van der Voordt, & Dewulf, 2016; Peterson, Brown, & Jun, 2015). However, typically diary studies take place over a longer period of time, such as a week (e.g. Beckers et al., 2016), or require participants to complete a diary on more than one occasion (e.g. Peterson et al., 2015). In the current study there were also activities that were omitted from the closed- response diary, such as household chores or caring commitments. This may have resulted in an inaccurate record of participants' use of time. There were also large individual differences in the time spent engaging in academic tasks, with some students reporting spending no time at all on academic activities within a given day. This may not accurately reflect a students' activities over a longer period of time. There is therefore a need for further research into students' daily activities using other research methods. It is also important to note that the students who participated in the current studies were all from science, technology, engineering and maths (STEM) subjects. It seems reasonable to suggest that the factors influencing reading practices may well vary across academic subjects, along with contact time, course structure, and academic expectations. Further research should therefore aim to explore students reading practices across different subject areas.

## Conclusions and recommendations

The current studies examined how much time students spend reading different types of academic material and potential explanations for relatively low frequencies of reading. In Study 1 students reported spending an average of 14.1 hours per week reading academic material. Although this is longer than suggested in previous studies it is still

substantially less than university expectations. Study 2 sought to explore potential explanations of this finding. Focus groups with students revealed six main factors which may influence reading practices; Expectations, Perceived benefits, Course structure, Lack of time, Practicalities, and Confidence. Study 3 sought to further explore two of these factors, Lack of time and Confidence. In a diary exercise participants reported to spend an average of 6.5 per day engaging in academic activities. They also reported being confident with reading both textbooks and journal articles. The contrasting findings from Study 2 and Study 3 could be a result of several factors, including the timing of the studies within an academic semester. Future work should therefore examine how perceptions of confidence and competing demands for students' time change across the course of an academic year.

Future work would also benefit from exploring other factors which may be related to undergraduate students' reading habits, in order to inform future methods for encouraging students to read. Potential factors might include different teaching practices. For example, students may read more if teaching staff introduce in-course quizzes (e.g. Hatteberg & Steffy, 2013; Howard, 2004; Johnson & Kiviniemi, 2009), reading logs (e.g. Starcher & Profitt, 2011), and learning logs (Carney et al., 2008). However, it is important to note that efforts to promote reading may influence students' satisfaction with a course, (e.g. Marek & Christopher, 2011; Sappington et al., 2002), with some students viewing quizzes as threats to their grades and thus providing poorer course evaluations (Redding, 1998).

The findings of the current studies nonetheless have important implications for programme teams. Programme teams should take care when setting assessment deadlines, where possible spreading these out over the course of a semester. Several deadlines within a short space of time may exacerbate students' perceptions of having little time for reading or independent study. Programme teams may also want to consider ways to enhance students' confidence with reading journal articles, as confidence was lower with journal articles than textbooks. This may come from further supporting students to develop and practice skills such as reading journal articles. This could come in the form of sessions that could be added to the taught timetable, covering how to go about reading a journal article, or perhaps the provision of materials such as annotated examples. An additional approach to consider is using peer support for reading activities or independent study (see also Thomas et al., 2015). Teaching staff may also want to consider the extent to which the reading of textbooks and journal articles is integrated or a necessity for taught sessions. In Study 2 students suggested that they would read more if it was required in order to understand a lecture or required in order to prepare for a seminar session. More generally, it is suggested that programme teams explore students reading practices and perceptions of reading in order to develop ways of encouraging students to read and enhance their practice.

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## References

- Acheson, D. J., Wells, J. B., & MacDonald, M. C. (2008). New and updated tests of print exposure and reading abilities in college students. *Behavior Research Methods*, 40(1), 278–289.
- Artis, A. B. (2008). Improving marketing students’ reading comprehension with the SQ3R method. *Journal of Marketing Education*, 30(2), 130–137.
- Bakker, A. B., Vergel, A. I. S., & Kuntze, J. (2015). Student engagement and performance: A weekly diary study on the role of openness. *Motivation and Emotion*, 39(1), 49–62.
- Beckers, R., van der Voordt, T., & Dewulf, G. (2016). Why do they study there? Diary research into students’ learning space choices in higher education. *Higher Education Research and Development*, 35(1), 142–157.
- Bharuthram, S. (2012). Making a case for the teaching of reading across the curriculum in higher education. *South African Journal of Education*, 32, 205–214.
- Braguglia, K. H. (2005). Reading habits of business students. *Journal of College Teaching and Learning*, 2(3), 67–72.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- British Psychological Society. *Code of Human Research Ethics*. Available from <http://www.bps.org.uk/publications/policy-and-guidelines/research-guidelines-policy-documents/research-guidelines-poli> [Accessed April 2016]. [Accessed: April 2016].
- Brost, B. D., & Bradley, K. A. (2006). Student compliance with assigned reading: A Case Study. *Journal of Scholarship of Teaching and Learning*, 6(2), 101–111.
- Carney, A. G., Fry, S. W., Gabriele, R. V., & Ballard, M. (2008). Reeling in the big fish: Changing pedagogy to encourage the completion of reading assignments. *College Teaching*, 56(4), 195–200.
- Cerrito, P. B., & Levi, I. (1999). An investigation of student habits in mathematics courses. *College Student Journal*, 33(4), 584–588.
- Clump, M. A., Bauer, H., & Bradley, C. (2004). The extent to which psychology students read textbooks: A multiple class analysis of reading across the psychology curriculum. *Journal of Instructional Psychology*, 31(3), 227.
- Connor-Greene, P. A. (2000). Assessing and promoting student learning: Blurring the line between teaching and testing. *Teaching of Psychology*, 27(2), 84–88.
- Derryberry, W. P., & Wininger, S. R. (2008). Relationships among textbook usage and cognitive-motivational constructs. *Teaching Educational Psychology*, 3(2), 1–11.
- Erdem, A. (2015). A research on reading habits of university students (Sample of Ankara University and Erciyes University). *Procedia- Social and Behavioural Sciences*, 174, 3983–3990.
- Fernald, P. S. (2004). The Monte Carlo quiz: Encouraging punctual completion and deep processing of assigned readings. *College Teaching*, 52(3), 95–99.
- Endsleigh (2015). *Student Survey*. Available from <https://www.endsleigh.co.uk/press-releases/10-august-2015/> [Accessed May 2017].
- Gosling, S. D., John, O. P., Craik, K. H., & Robins, R. W. (1998). Do people know how they behave? Self-reported act frequencies compared with on-line codings by observers. *Journal of Personality and Social Psychology*, 74(5), 1337–1349.

- Hatteberg, S. J., & Steffy, K. (2013). Increasing reading compliance of undergraduates: An evaluation of compliance methods. *Teaching Sociology*, 41(4), 346–352.
- Henderson, C., & Rosenthal, A. (2006). Reading Questions. *Journal of College Science Teaching*, 35(7), 46–50.
- Hoeft, M. E. (2012). Why university students don't read: What professors can do to increase compliance. *International Journal for the Scholarship of Teaching and Learning*, 6(2), 1–19.
- Howard, J. R. (2004). Just-in-time teaching in sociology or how I convinced my students to actually read the assignment. *Teaching Sociology*, 32(4), 385–390.
- Huang, S., Capps, M., Blacklock, J., & Garza, M. (2014). Reading habits of college students in the United States. *Reading Psychology*, 35(5), 437–467.
- Jensen, M., & Moore, R. (2008). Reading trade books in a freshman biology course. *The American Biology Teacher*, 70(4), 206–210.
- Johnson, B. C., & Kiviniemi, M. T. (2009). The effect of online chapter quizzes on exam performance in an undergraduate social psychology course. *Teaching of Psychology*, 36(1), 33–37.
- Leeming, F. C. (2002). The exam-a-day procedure improves performance in psychology classes. *Teaching of Psychology*, 29(3), 210–212.
- Lei, S. A., Bartlett, K. A., Gorney, S. E., & Herschbach, T. R. (2010). Resistance to reading compliance among college students: Instructors' perspectives. *College Student Journal*, 44(2), 219–229.
- Marek, P., & Christopher, A. N. (2011). What happened to the first "R"? Students' perceptions of the role of textbooks in psychology courses. *Teaching of Psychology*, 38(4), 237–242.
- Mokhtari, K., Reichard, C. A., & Gardner, A. (2009). The impact of internet and television use on the reading habits and practices of college students. *Journal of Adolescent and Adult Literacy*, 52(7), 609–619.
- Molina, J. A., Campana, J. C., & Ortega, R. (2016). What do you prefer for a relaxing time at home: reading, watching TV or listening to the radio? *Applied Economics Letter*, 23, 1278–1284.
- Murden, T., & Gillespie, C. S. (1997). The role of textbooks and reading in content area classrooms: What are teachers and students saying? In W. M. Linek & E. G. Sturtevant (Eds.), *Exploring Literacy* (pp. 87–96). Pittsburg, KS: College Reading Association.
- Peterson, E. R., Brown, G. T., & Jun, M. C. (2015). Achievement emotions in higher education: A diary study exploring emotions across an assessment event. *Contemporary Educational Psychology*, 42, 82–96.
- Redding, R. E. (1998). Students' evaluations of teaching fuel grade inflation. *American Psychologist*, 53, 1227–1228.
- Ryan, T. E. (2006). Motivating novice students to read their textbooks. *Journal of Instructional Psychology*, 33(2), 135–141.
- Sappington, J., Kinsey, K., & Munsayac, K. (2002). Two studies of reading compliance among college students. *Teaching of Psychology*, 29(4), 272–274.
- Sharma, A., Van Hoof, B., & Pursel, B. (2013). An assessment of reading compliance decisions among undergraduate students. *Journal of the Scholarship of Teaching and Learning*, 13(4), 103–125.
- Sheorey, R., & Mokhtari, K. (1994). The reading habits of developmental college students at different levels of reading proficiency. *Reading Improvement*, 31(3), 156.
- Starcher, K., & Proffitt, D. (2011). Encouraging students to read: What professors are (and Aren't) doing about it. *International Journal of Teaching and Learning in Higher Education*, 23(3), 396–407.
- Sturzaker, J. (2014). "I think that sometimes reading is overrated": Tactical, strategic, and epistemological reflections on planning education. *Journal of Planning Education and Research*, 34(4), 465–471.
- Thompson, L. J., Clark, G., Walker, M., & Whyatt, J. D. (2013). 'It's just like an extra string to your bow': Exploring higher education students' perceptions and experiences of extracurricular activity and employability. *Active Learning in Higher Education*, 14(2), 135–147.



- Tomasek, T. (2009). Critical reading: Using reading prompts to promote active engagement with text. *International Journal of Teaching and Learning in Higher Education*, 21(1), 127–132.
- Thomas, L., Hockings, C., Ottaway, J., Jones, R. (2015) Independent learning: student perspectives and experiences. [https://www.heacademy.ac.uk/sites/default/files/independent\\_learning\\_final.pdf](https://www.heacademy.ac.uk/sites/default/files/independent_learning_final.pdf)
- Zawadzki, M. J., Smyth, J. M., & Costigan, H. J. (2015). Real-time associations between engaging in leisure and daily health and well-being. *Annals of Behavioral Medicine*, 49(4), 605–615.